

## Opencut Mining Program

August 30, 2006

Subject: John Maryott Gravel Mining Application - Comments by September 18, 2006

To all Interested Parties:

On June 20, 2006, John Maryott applied for a permit to mine and crush gravel from a 40-acre site on the West Bench. Access would be from both Highway 212 and Willow Creek Road. The operation would be reclaimed by 2020 to irrigated pasture.

The Environmental Assessment (EA) attached to this letter identifies and analyzes impacts of the requested actions. It has been mailed to all parties that have shown an interest in the project, including local residents and businessmen, the county commissioners, and John Maryott. Copies of this document are all available on-line at <http://deq.mt.gov/ea/opencut.asp>.

Please read this Environmental Assessment. If you have any questions, concerns, or comments, you can mail them to me at the Department of Environmental Quality, IEMB, 1371 Rimtop Drive, Billings, MT 59105, fax them at 247-4440, e-mail me at [jostephen@mt.gov](mailto:jostephen@mt.gov), or call me at 406-247-4435. Comments must be submitted by Monday, September 18, 2006.

Thank you.

Sincerely,

Jo Stephen,  
Reclamation Specialist

JS/dv

Attachments:

- EA
- Map

# **ENVIRONMENTAL ASSESSMENT DRAFT**

## **Maryott Gravel Pit Application by John Maryott Near Red Lodge, Montana**

An environmental assessment (EA) is required under the Montana Environmental Policy Act (MEPA). An EA functions to identify, disclose and analyze the impacts of an action, in this case operating a gravel pit over which the state must make a decision, so that an informed decision can be made. MEPA sets no environmental standards even though it requires analysis of both the natural and human environment. This document may disclose many impacts that have no legislatively required standards or over which there is no regulatory authority. The state legislature has provided no authority in MEPA to allow the Department of Environmental Quality (DEQ), or any other state agency, to require conditions or impose mitigations on a proposed permitting action that are not included in the permitting authority and operating standards in the governing state law, such as the Opencut Mining Act, the Clean Air Act of Montana, or any other applicable state environmental regulatory law. Beyond that, a company may agree to voluntarily modify its proposed activities or accept permit conditions.

The state law that regulates gravel-mining operations in Montana is the Opencut Mining Act. This law and its approved rules place operational guidance and limitations on a gravel-mining project during its life, and provides for the reclamation of permitted land area. This law requires that a reclamation bond, cash deposit or other financial instrument be submitted to the state to cover the complete costs of reclaiming the site to its approved, post-mining land use.

The permit decision cannot be based upon the popularity of the project, but upon whether or not the proponent has met the requirements of the Opencut Mining Act, pursuant rules, and other laws pertaining to his proposed actions.

SITE NAME: Maryott APPLICANT: John Maryott  
LOCATION: SE Sec 10 T7S R20E COUNTY: Carbon

**SYNOPSIS OF PROPOSED ACTION:** John Maryott proposes to mine and crush gravel from a 40-acre site near Fox, MT, about 2 miles north of Red Lodge. No asphalt plant, concrete plant, or wash plant are being requested. Mining would be in several phases. Phase I would be for 10 acres. As mining in Phase I is completed, a map and bond would be submitted for subsequent phases. Reclamation of areas where mining is completed would be conducted concurrently.

Maximum depth of mining would be about 25 feet. The crusher and most product stockpiles would be placed on the floor of the pit.

Normal hours of operation would be from 7 a.m. to 7 p.m. Monday through Saturday. Fueling, maintenance, or a major construction job could be conducted outside those hours.

Access would be by a new road about 200 yards long from Highway 212 or by a 20-foot wide easement a half mile long from Willow Creek county road to the west.

Reclamation of the entire 40-acre site would be completed to irrigated pasture by June 2020. The reclamation bond for Phase I is for \$26,373.

Mining and road improvements were begun earlier this year under the 10,000-yard exemption that is allowed under the Opencut Act. As of the end of June 2006 that 10,000 yards had been excavated, and mining and other related activities ceased until action could be taken on this application.

A: Significant Unavoidable Impacts B: Insignificant as a result of conditioned mitigation C: Insignificant as proposed L: Long term or permanent impacts S: Short term impacts

				<b>POTENTIAL IMPACTS</b>		
	A	B	C	L	S	EXPLANATION
<b>PHYSICAL ENVIRONMENT</b>						
1. <u>TOPOGRAPHY</u>			X	X		<p>The main permit area is a flat, flood-irrigated field near the edge of the West Bench. The east access road from Highway 212 would slant up the face of the bench at less than a 10 percent grade. The west access road crosses about a half mile of irrigated fields before reaching Willow Creek Road.</p> <p>The pit and roads would remain after mining.</p>
2. <u>GEOLOGY</u> ; Stability			X	X		<p>Rock Creek cut down through rocky, glacial outwash material from the Beartooth plateau and created the East and West Benches 100 to 140 feet high on either side of the half-mile wide valley floor.</p> <p>The West Bench slope face is very steep - from 25 to 45 percent. It has many springs and small slumps fed mainly by irrigation water that infiltrates through the fields and works its way horizontally over to the slope face. Vegetation such as aspen, cottonwoods, and many different shrubs take advantage of this water supply.</p> <p>Maximum mining depth would be 25 feet. The gravel removal would be a permanent impact.</p>
3. <u>SOILS</u> ; Quality, Distribution			X		X	<p>Soils are alluvial loam of the Charlos Series. They are neutral to slightly acidic. The dark topsoil layer is about 6 inches deep with about 12 inches of clay-loam subsoils. The U.S. Department of Agriculture's soil survey ranks the suitability of these soils below 30 inches from the surface as "Good" for sand and gravel extraction, "Good" for fill subgrade material, "Medium Stability and Fair Compaction" for embankments, "Generally Favorable" for highway location, and "Favorable" for winter grading. The parent material is gravel outwash material from the glaciated Beartooth Plateau.</p> <p>Several county roads, field access roads, and irrigation ditches traverse the bench face. These have been stable over the years when impacted by normal runoff and spring flows. The Maryott access road a few hundred yards to the north has been in existence for 80 years without slumping.</p> <p>In June 2006 a landslide event occurred that apparently</p>

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						<p>entailed a different, abnormal set of circumstances. Irrigation water from a ditch (not from normal rainfall or infiltration) ran over the edge of the bench, saturated the slope and caused a slump or landslide that started near the top of the slope and carried down hill and across about 100 feet of the heavily vegetated valley floor. The flow stopped in the borrow ditch of Highway 212. Construction of the east access road was not involved in the slump. Although the water in that ditch is for John Maryott's fields the lessee was in control of it at that time. Maryott will control the amount of water in that ditch and which fields he wishes to irrigate. These soils are good for both dryland and irrigated farming since they hold moisture well in the upper horizons and the underlying gravels drain well.</p> <p>Good soil salvage would result in no adverse impacts to this soil.</p> <p>Average annual precipitation on the bench is about 18 inches.</p>
4. <u>WATER</u> ; Quality; Quantity; Distribution			X		X	<p>There are no wells on the bench in the vicinity of the site. Rock Creek is located east of Highway 212 well below the elevation of the mine site. It would not be impacted by operations. Spring Creek crosses under the existing west access road a few hundred yards from Willow Creek Road. This crossing has been in existence for many years without adverse impact to the creek.</p> <p>The west access road crosses about a dozen other ditch and wastewater crossings. Culverts were extended or replaced during improvement of the west access road. The replacements were of the same or larger size than the originals. Expansion and improvement of all these crossings earlier in 2006 has not shown any ill effects to the creek, ditches, or wastewater crossings. Culverts would be placed where needed under the east access road.</p> <p>Stormwater would be retained on site. The pit slopes away from the east access road. Stopping off-site runoff would reduce or eliminated water erosion from the site and allow for control of erosion from the access roads.</p> <p>Farming and irrigation on the undisturbed portion of the mine site and on surrounding lands would continue. Ditches on Maryott's property could be rerouted around the active mining areas but would not interfere with</p>

				POTENTIAL IMPACTS		
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						<p>other landowner's amounts or points of delivery.</p> <p>Irrigation water would not be used in the active mining area. This would decrease, to a small degree, infiltration and the amount of water available to vegetation on the bench slope, but would not adversely affect plant growth. Mining in this area would not disturb the water table.</p> <p>A lined and bermed containment area would be placed around and under the fuel tank according to the approved fuel storage guidelines.</p> <p>There would be no impact to water quality or quantity from mining.</p>
5. <u>AIR</u> ; Quality			X		X	<p>Air quality standards are based upon the Clean Air Act of Montana and pursuant rules and are administered by the DEQ Air and Waste Management Bureau.</p> <p>DEQ has an Environmental Protection Agency (EPA) approved air quality program. Permits and permit conditions are established to promote compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health and the environment.</p> <p>DEQ, in an effort to protect air quality, operates an air quality program that includes permitting, compliance, and enforcement staff. The air quality program staff members are available to answer any specific questions of interested parties.</p> <ul style="list-style-type: none"> <li>• The Air Permitting Section (Dave Klemp (406-444-0286)) is available to answer any questions on air quality permits for a specific company and the operating conditions that are established in those permits.</li> <li>• The Air Compliance Section (Dan Walsh (406-444-9786)) is available to answer questions in regard to operations of a facility in a particular area and the inspections and testing that may be required for the facility.</li> <li>• The Compliance Management Section of the Enforcement Division (Larry Alheim (406-444-2411)) is able to answer questions on the compliance history of a facility. This section is also responsible for enforcing the clean air laws, should violations of those laws occur.</li> </ul>

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						<p>Fugitive dust is that which blows off the pit floor, stockpiles, gravel roads, farm fields, etc., and is regulated by the Air and Waste Management Bureau. It is considered to be a nuisance but not considered to be harmful to health. It is regulated at mine sites by gauging opacity - measuring visibility through the dust plume.</p> <p>A water truck would be available for dust control on-site and on the access roads. It is anticipated that during the hottest summer days an average of 4,000 gal/day of water would be used to control fugitive dust.</p> <p>Magnesium chloride treatment may also be used in heavy traffic areas or on the access and county road. Magnesium chloride is an approved, very widely used dust control agent. There is a wide range of other approved products also available.</p> <p>The operator would cooperate with the county to help control dust on county Willow Creek road south toward Highway 78. Implementation of dust control measures on both the access road and Willow Creek Road would reduce adverse impacts of dust to a minimum.</p> <p>The crusher has an air quality permit that meets the standards required under the Montana Clean Air Act.</p> <p>Air quality impacts, if operations are managed correctly, would be minimal and would not cause a health hazard.</p>
6. <u>UNIQUE, ENDANGERED, FRAGILE, or LIMITED</u> environmental resources			X		X	<p>No species of special concern live on or near this site. Because this site is farmed and disturbed, it does not provide native habitats.</p> <p>An inquiry to the Montana Natural Heritage Program disclosed that 3 species of concern might live in the general area. The Preble's shrew requires sagebrush habitat. Both the lynx and beautiful fleabane require montane or subalpine habitat that also do not exist close to this location.</p>
BIOLOGICAL ENVIRONMENT						
1. <u>TERRESTRIAL, AVIAN, and AQUATIC</u> ; species and habitats			X		X	<p>Deer and rarely elk graze these fields. Small mammals, waterfowl, song birds and other animals utilize these and surrounding fields.</p> <p>Mining would have minimal impact because of the small area that would be disturbed and the relatively</p>

				POTENTIAL IMPACTS		
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						short timeframe for disturbance.
2. <u>VEGETATION</u> ; quantity, quality, species			X		X	<p>The main permit area is irrigated hayland with grasses and clover. The west access road passes through other irrigated fields.</p> <p>The east access road crosses riparian habitat in the Rock Creek Valley. There are no Army Corps of Engineers regulated wetlands in this area.</p> <p>Mining would have minimal impact because of the short duration of the project and reclamation to an irrigation seed mix. Only about 1 acre would be permanently disturbed for access roads.</p> <p>State law requires that a mine site gets reclaimed to some beneficial use, in this case restoring the land to irrigated pasture or hayland. If a portion of the site is no longer needed for the mining operation, it would be reclaimed before the final reclamation date.</p> <p>Reclamation bonds are calculated to cover the costs to the State of Montana of returning a property to the proposed productive, post-mining land use - in this case pasture - should the permit holder be unable to fulfill the requirements of his permit. Reclamation bonds include money to grade high walls (at \$1.00 per cubic yard), replace soil (at \$1.35 per inch of soil per acre), spray for noxious weeds (at \$100.00 per acre), and other activities included in the plan of operations, plus a 10 percent administrative fee. This initial reclamation bond would be \$26,373 and would be modified should contingencies such as more topsoil than estimated be salvaged or cost to the state for contracting reclamation equipment increase.</p>
3. <u>AGRICULTURE</u> ; grazing, crop production			X		X	<p>Mining would result in a short term reduction of hay and pasture production. About 10 acres would be taken out of production during the first phase. In this area the average irrigated production is about 2 tons per acre.</p> <p>Phase I production loss would be about 20 tons per year until it was reclaimed at which point full production would resume. If the entire 40 acres were disturbed at the same time maximum agricultural production loss would be increased by a multiple of four. However, in reality, concurrent reclamation would be replacing some production.</p>
<b>HUMAN ENVIRONMENT</b>						

				POTENTIAL IMPACTS		
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1. <u>SOCIAL</u> ; structures and mores						No impacts anticipated.
2. <u>CULTURAL</u> uniqueness/diversity			X	X		<p>The City of Red Lodge started in the late 1800's as a coal mining community. When the coal market faded in the middle of the twentieth century, agriculture, mainly ranching, became, and remains, the main source of income in the area. However, recreation is contributing the major portion of current income to the city. New businesses mainly cater to this industry.</p> <p>This gravel mine would help provide construction and road building materials for this growth.</p>
3. <u>POPULATION</u> ; quantity/diversity			X	X		<p>Carbon County and the Red Lodge area are growing in population. The county's population grew 18.2 percent during the last census period. The 2005 population estimate is another 3.7 percent higher at 9,902 people. Most of these people are drawn by the year-round recreational amenities of the area. The gravel pit would have little or no affect on the population of the area but would supply needed resources for the growth.</p>
4. <u>HOUSING</u> ; quantity/distribution			X	X		<p>Much development is occurring along Rock Creek and in the golf course area where several large subdivisions have been approved. The benches and foothills farther from town are being broken into small ranchettes and acreage residential sites. Some are seasonal recreational structures, some year-round homes. Values range from small, inexpensive cabins to multi-million dollar domiciles.</p>
5. <u>HUMAN HEALTH &amp; SAFETY</u>			X		X	<p>On-the-job safety is regulated by the Mine and Health Safety (MSHA) Administration. Both federal and state inspectors could visit the site at any time without previous notice. See Section 4 - Air above for health hazards due to dust. Traffic safety is regulated under both federal and state standards by the Montana Department of Transportation (MDT) with enforcement by the Highway Patrol and local police. See Section 15-Traffic below for a discussion of the possible increase in truck traffic.</p>
6. <u>COMMUNITY &amp; PERSONAL INCOME</u>						No impacts anticipated.
7. <u>EMPLOYMENT</u> ; quantity, distribution						No impacts anticipated.
8. <u>TAX BASE</u> ; state/local			X	X		Local, state, and federal tax revenue may increase



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tax, <u>LAND VALUES</u>						<p>depending on how the land is taxed upon conversion to industrial use with the licenses and fees the proponent is required to pay, and whether the proponent adds employees or equipment, increases overall production, or moves employees and equipment from one jurisdiction to another.</p> <p>Under the Opencut Mining Act, the Legislature has provided DEQ two means of mitigating the effects of gravel operations on adjacent property. First, DEQ has authority to protect air quality; to minimize noise and visual impacts to the degree practicable through use of berms, vegetation screens, and limits on hours of operation, and to otherwise prevent significant physical harm to adjacent land. Second, the site must be reclaimed in order to protect and perpetuate the taxable value of property, land on which operations are complete.</p> <p>Several years ago, DEQ contracted a study to determine "whether the existence of a gravel pit and gravel operation impacts the value of surrounding real property." The study (Rygg, February 1998) involved some residential property near two gravel operations in the Flathead Valley. Rygg concluded that the above-described mitigating measures were effective in preventing decrease in taxable value of those lands surrounding the gravel pits. In his review of the study, Jim Fairbanks, Region 3 Manager of the Montana Department of Revenue, Property Assessment Division said:</p> <p>"In the course of responding to valuation challenges of ad valorem tax appraisals, your reviewer has encountered similar arguments from Missoula County taxpayers regarding the presumed negative influence of gravel pits, BPA power lines, neighborhood character change, and traffic and other nuisances. In virtually ALL cases, negative value impacts were not measurable. Potential purchasers accept newly created minor nuisances that long-time residents consider value diminishing."</p>	
9. <u>GOVERNMENT SERVICES</u> ;						No impacts anticipated.	
10. <u>INDUSTRIAL, COMMERCIAL</u> and <u>AGRICULTURAL</u>						No impacts anticipated.	

				POTENTIAL IMPACTS		
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activities						
11. <u>HISTORICAL and ARCHAEOLOGICAL</u>						<p>A June 28, 2006 letter from the State Historic Preservation Office (SHPO) states that SHPO records show no previous recorded cultural resource sites in or around the proposed opencut operation area. A site inspection by a DEQ environmental specialist did not reveal any artifacts, signs of occupation, or other cultural resources. Surface disturbance by farming has decreased the likelihood that such resources could be found on site. If during operations resources were to be discovered, activities would be halted and temporarily moved to another area until SHPO was contacted and the importance of the site was determined.</p>
12. <u>AESTHETICS</u>			X	X		<p>The mine was started under the law's 10,000 yard exclusion. Topsoil was salvaged and stockpiled to the west. Using excavated gravel the west access road easement was improved and construction was started on the east access road.</p> <p>There are seven homes near the mine area in the Kent Subdivision. They are across Highway 212, the nearest being about 700 feet east of, and at least 100 feet below the site. No homes to the west are within a half mile of the pit. The nearest home to the west is at the intersection of the west access road and Willow Creek Road, set back about 100 yards from each, with access off the access road. A second ranch complex has used the access road for at least 30 years. Two other homes are several hundred yards back from Willow Creek Road, south toward Highway 78.</p> <p><b>Noise:</b> No efforts can eliminate all noise from any operation. The mine design sets the pit back from the edge of the bench. Most activities have been and, if approved, would be conducted in the bottom of the pit. This is one of the most effective visual and noise mitigation measures that can be taken. As the pit is expanded and deepened, it becomes more effective.</p> <p>The largest impact would be from the noise of truck traffic. The operator has stated that "Jake brakes" would not be used unless in an emergency.</p> <p>The home at the intersection of the west access road and Willow Creek Road would be impacted by the noise from the trucks. Trucks would be slowing down and accelerating on both the access road and Willow Creek</p>

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						<p>Road.</p> <p>Truck noise on the east access road would be audible to residents of the Kent Subdivision. The upper portion of the road was cut into the bench, leaving the natural hill slope to help block truck noise. As the road progressed downhill cut through to the outside edge of the slope with only vegetation to help block the noise. The cottonwoods when not in leaf would do little to reduce it. The existing traffic noise on Highway 212 creates a background noise level. Because the trucks would be speeding up and slowing down on the highway, and running the slope of the access road in lower gears, each truck would have a longer, not necessarily louder impact on the neighborhood.</p> <p><b>Visual:</b> The mine is very difficult to see from Highway 212 because of its location on top of the West Bench over 100 feet in elevation above the highway. Cottonwoods also help block the view of the access road. The mine is not visible from Willow Creek Road.</p>
13. <u>ENVIRONMENTAL PLANS</u> and <u>GOALS</u> ; local and regional						No impacts anticipated.
14. <u>DEMANDS</u> on <u>ENVIRON- MENTAL RESOURCES</u> of land, water, air and energy						No impacts anticipated.
15. <u>TRANSPORTATION</u> ; networks and traffic flows			X		X	<p>MDT has issued an Approach Construction Authorization for the east access road onto Highway 212. This means that with proper construction, the location meets safety standards. The approach would be inspected by MDT.</p> <p><b>Traffic:</b> To calculate the mine's average daily trips (ADT) or number of trucks per day, one divides the total amount of gravel to be removed (1,000,000 cubic yards) by the life of mine (14 years), by the number of work days per year (314) by the size of the trucks (20 yards). Then multiply by two for round trips. Rounding up, this results in 23 ADT by trucks.</p> <p>MDT records show on average over the year 2780 vehicles per day go past this site on Highway 212. The annual large truck percentage is 1.4 percent or about 47</p>

					POTENTIAL IMPACTS	
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						<p>per day. The traffic count for Highway 78 was 1122 with 40 of them being trucks.</p> <p>This number can then be compared to MDT traffic counts. Since there are two access roads, it is impossible to know how many trucks might use each road. If half the trucks used each road it would increase truck traffic from 47 to 59 and 40 to 52 on Highways 212 and 78 respectively.</p> <p>However, the construction industry must work when the weather is good and often shuts down for 1 to 2 months in the winter. So summertime numbers, especially if there were a major road job, would be substantially higher.</p>

**REGULATORY IMPACT ON PRIVATE PROPERTY:** The analysis done in response to the Private Property Assessment Act indicates no impact. The Department does not plan to deny the application or impose conditions that would restrict the use of private property so as to constitute a taking.

**PUBLIC INVOLVEMENT:** Landowner, Natural Heritage Program, State Historic Preservation Office

**OTHER GROUPS OR AGENCIES CONTACTED OR WHICH MAY HAVE OVERLAPPING JURISDICTION:**

Air Resources Management Bureau, Mining Safety and Health, MT Dept. of Transportation, Carbon County Commissioners, Carbon County Weed Board, Carbon County Planning Department

**ALTERNATIVES CONSIDERED:** Denial

**RECOMMENDATIONS CONCERNING PREPARATION OF AN EIS:** Unnecessary, No Significant Impacts

APPROVED BY: Peter Mahrt DATE: August 30, 2006

Prepared by Jo Stephen, August 2006

# MARYOTT PIT



Willow Creek